

Aggregation of triangle of distortion functions

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Abstract

In this paper we introduce notions of distortion function and aggregated distortion function. Applying some extended aggregation function on the triangle of distortion functions, a new extended aggregation function is obtained. Properties of the aggregation function constructed in this way depend on the properties of applied aggregation function and the distortion functions used. Its properties as continuity, convexity, concavity, subadditivity and superadditivity are investigated.

Keywords: Aggregation functions, Distortion function, Convexity, Concavity, Subadditivity, Superadditivity